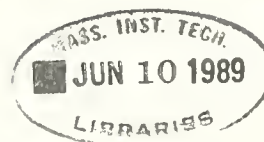


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BEYOND THE DEBT CRISIS:
ALTERNATIVE FORMS OF FINANCING GROWTH

Donald R. Lessard

WP#1921-89

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MASSACHUSETTS
INSTITUTE OF TECHNOLOGY
50 MEMORIAL DRIVE
CAMBRIDGE, MASSACHUSETTS 02139

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BEYOND THE DEBT CRISIS: ALTERNATIVE FORMS OF FINANCING GROWTH^{*}

Abstract

This paper examines the potential benefits of and obstacles to the inclusion of alternatives to general obligation finance such as direct investment, portfolio equity investment, quasi-equity investment, and commodity-price indexed debt in the external financing of LDCs. The advantage and obstacles are first considered for a country starting with a clean slate, then for a country suffering from a debt overhang in the context of both concerted and voluntary exchanges.

***. I am grateful to Jonathan Eaton for comments on an earlier draft.**

****.**Professor of International Finance and Management, MIT Sloan School of Management, 50 Memorial Drive, Cambridge, MA 02139. (617) 253-6688.

Introduction

As the debt crises of developing countries continue with no apparent end in sight, the structure of these countries' obligations as well as their aggregate amount are receiving increasing attention. It is increasingly acknowledged that a structure of obligations dominated by general-obligation, floating rate borrowing is far from ideal (Lessard and Williamson [1985], Krugman [1988]) and that it has contributed to the severity of the crisis. The potential role of alternatives in resolving the crisis is receiving even greater attention, but with much less agreement. On the one hand, debt-equity swaps and other variants that combine debt buybacks with alternative forms of finance, typically in the context of voluntary exchanges, are held out as the leading way out of the crisis by institutional observers, bankers, private sector groups in LDCs, and a few academics (see for example Ganitsky and Lema [1988] and Regling [1988]). On the other hand, such exchanges are typically depicted as inconsequential or even damaging to the interests of LDCs by many academic economists and LDC officials (see e.g. Bulow and Rogoff [1988], Dornbusch [1987], Froot 1988], and Krugman [1988]).

Much of this debate rests on the false premise that one must choose between debt conversion and debt reduction. It is true that the champions of conversion programs include banks that are seeking to maintain the value of their claims and that much of the opposition to such programs comes from LDCs and others who believe that substantial debt reduction in order (see e.g. Sachs [1989]). However, there is no logical or institutional reason that a reduction in debt should not be accompanied by an improvement in the efficiency of the claims structure or that conversion somehow precludes reduction. While the conversion of ldc general obligations into alternative forms can take place through voluntary debt conversions, it also can take place through negotiated exchanges involving all lenders as well as through separate new money packages. Therefore, it is inappropriate to associate the potential shortcomings and abuses of voluntary exchanges with alternative forms of finance in general.

This chapter, therefore, focuses on the potential role of alternatives to general obligation finance in the inevitable restructuring of Latin American countries' obligations, whether or not this restructuring includes significant debt reduction.

What is "Alternative" Finance?

Commercial alternatives to general obligation finance are defined here as modes of finance that involve *ex ante* sharing of risks inherent in particular projects or enterprises or in the borrowing country's overall portfolio of activities and, in many cases, a corresponding sharing of responsibility and control. While this is a broad definition that includes modes of finance ranging from non-recourse project lending to direct foreign investment, it is narrower than commercial finance that includes all modes of finance that bear commercial terms (*i.e.* everything but concessional finance) or that involve a private lender, a private borrower, or both.

Our definition, for example, excludes many types of financing that may be provided by private lenders on commercial terms. These include most forms of general obligation financing, including traditional libor-linked floating rate debt as well as fixed interest rate bonds, note issuance facilities, etc, whose service does not depend in any direct way on outcomes within the borrowing country. On the other hand, it does include contingent general obligations whose terms that are indexed to factors that influence the borrowing country's ability to pay, such as commodity prices or indices of external economic activity, *e.g.* total trade among OECD countries or industrial production in industrialized countries, as well as "share of export" and other modes of financing that are linked directly to some measure of the borrowing country's overall ability to pay.

A key element in the analysis is the emphasis on those alternatives that provide the possibility of gains to creditors as well as debtors, in contrast to those that simply shift the burden from one group to the other. In technical terms, this implies an emphasis on completing markets that currently function poorly or not at all. However, this also requires an assessment of why markets currently are not complete along the relevant dimensions, in particular the political and institutional obstacles to various alternative financing modes.

Why Consider Alternative Finance?

The usual reason for seeking alternatives to general obligation borrowing from official and commercial sources is the perception that the supply of these resources simply will not be sufficient to meet LDCs' needs. While undoubtedly

correct, this perspective misses the point. LDCs' financial problems are not the result of limitations on the aggregate supply of international finance. Rather, they reflect the limited ability of particular LDCs to contract credibly for sufficient external finance to meet their needs, especially given the already substantial debt overhang faced by many of them.¹

The financing requirements of developing countries are small relative to the size of world capital markets. Even an ambitious figure of \$20 billion a year is less than 10 percent of the current net debt financing provided by OECD markets and institutions. Individual countries face a virtually elastic supply on the condition that they are able to make credible commitments to meet the terms of their obligations.² Therefore, tapping new sources of funds should not be expected to increase greatly the potential supply of funds to a particular country. A given country, however, may increase its actual supply of funds (or reduce the degree of debt relief required to put it back on a current basis) by recontracting in a way that shifts the pattern of promised payments across future circumstances and thus expands the range of commitments it can back with credibility. Our focus, therefore, is not on the size of external financial markets or of these markets' potential appetite for LDC assets; rather it is on how commercial alternatives to general obligation finance can increase the actual supply of funds to these countries, reduce the burden imposed by external financing, and improve the performance of the assets financed.

We take it as given that the overriding goal of a restructuring a country's obligations and recapitalizing its economy is to restore an acceptable level of growth in the short run and provide the basis for dynamic long-run development involving domestic as well as foreign private interests. The primary reasons for changing not only the amount but also the structure of financing are to:

(1) reduce the "overhang" of senior obligations (official and commercial bank debt) that distort public and private economic incentives within the country and

¹This is not to deny that many LDCs, including the poorest countries in Latin America, face an debt relief and aid crisis in that, regardless of how restructured, their obligations outweigh their ability to repay and voluntary external finance will not provide them with a tolerable level of growth.

²This result is obtained in theoretical models, see for example Eaton, Gersovitz, and Stiglitz [1986], and is borne out by the fact that newly industrialized countries (NICs) have been able to achieve very rapid growth in external financing in line with the growth of their economies.

preclude the issuance of new, junior claims (project financing, direct investment, local equity investment) and to limit the explicit and implicit costs to debtors of current or potential future noncompliance;

(2) more closely match countries' obligations their ability to pay over time and across circumstances (e.g. commodity prices and interest rates), thereby simultaneously increasing the potential value of their obligations and reducing potential costs of noncompliance; and

(3) rearrange the allocation of risks, rewards, and responsibilities among agents in order to increase the benefits of diversification and participation.

This chapter is organized in five parts. The first classifies alternative financing modes in terms of the extent to which they involve risk sharing and managerial control and illustrates these general dimensions with several specific alternatives. Part II examines the potential benefits of alternative forms of external commercial finance for LDCs without an existing debt overhang. Part III suggests why these alternatives have not played an important role in LDCs' financing to date, even prior to the onset of their debt crises, in order to identify the political and institutional preconditions for their implementation. Part IV examines the implications of a debt overhang for the attractiveness and feasibility of these alternatives in the context of concerted as well as voluntary exchanges, emphasizing those conditions where linking debt buybacks and the issuance of new obligations is superior to separate transactions. Part V summarizes the discussion of and identifies a series of steps that can and should be taken by countries, their external creditors, and the key international institutions to support the implementation of these alternative financing arrangements.

I. Commercial Financing Alternatives

There are a large number of alternatives to general obligation borrowing for obtaining external finance. It is useful to classify them along three dimensions:

1) expected cost, 2) degree of risk sharing or hedging and, 3) degree of managerial participation in the project or enterprise financed.

The *expected cost* is comprised of three components: the required expected return to investors, which may be substantially less than the promised rate in the case of risky obligations; the deadweight cost or penalty in the case of

nonperformance; and the monitoring and control costs associated with particular forms of finance. We assume that the *required expected return to investors* is given by a stylized international capital asset pricing model in which the risk premium is an increasing function of the covariance of this cost or return with aggregate world consumption, i.e. a world consumption beta.³ Therefore, short-term floating-rate obligations or price-level indexed obligations whose returns are largely independent of variations in aggregate output will command minimal investor risk premiums, while, for example, copper-linked bonds which have a significant positive covariance with aggregate output will require a substantial risk premium.⁴ A broadly diversified portfolio of local equities, though, will command only a slightly higher cost than floating rate debt since empirical analyses show that they are close to zero-beta assets with respect to external factors.

The enforceability of sovereign credit, in general, depends on the ability of lenders to impose penalties in the case of nonperformance, see e.g. Eaton, Gersovitz, and Stiglitz[1986]. These penalties generally result in deadweight costs, since their cost to borrowers is not offset by a corresponding gain to lenders. However, there is no similar generally accepted model of deadweight costs associated with nonperformance nor are there any estimates of its magnitude.⁵ We assume that *expected deadweight costs* depend on two factors: the expected incidence of nonperformance and the ability of lenders to distinguish between bad luck and bad faith on the part of borrowers with respect to meeting their commitments on particular claims. Therefore, we expect that these deadweight costs will be highest

³ Stulz [1988] derives an explicit international Capital Asset Pricing Model that links returns to assets' consumption betas.

⁴Risk premia are defined here as in the financial economics literature as increments in the expected return on an asset relative to the expected return on a zero-beta asset, not as adjustments in promised rates to reflect anticipated defaults as is common in the ldc debt literature.

⁵There is a great deal of uncertainty over what penalties a country will face when it does not meet its obligations. Most formal models assume that it will be relegated to financial and commercial autarchy for at least some period. Many observers, though, argue that these penalties are much smaller, see e.g. Kaletsky [1985]. Eichengreen and Portes [1988] infer from data from the 20's through the 50's that differential impact of default on subsequent access to credit is small, but this inference is questionable since in the subsequent period all LDCs effectively went into commercial and financial autarchy because of the world depression and the associated collapse of the international commercial and financial system.

for noncontingent general obligations, especially floating rate obligations that enhance the probability of default through adverse interest rate movements.

Monitoring costs depend on the amount and frequency of information and influence required for the enforcement of particular claims. At this stage we assume only that they are equal for all forms of general obligations, and are higher for claims that penetrate the economy and hence may require information and influence at the level of firms or projects.

Risk sharing refers to the extent to which the contractual obligation is linked explicitly to some aspect of the borrower's economic situation and hence shifts risks inherent in the domestic economy to other participants in the world economy. Equity investment, for example, entitles the investor to a *pro rata* share of the profits of a particular firm, while commodity-linked bonds or export participation notes perform the same role at the level of the economy as a whole. This attribute is most valuable to a borrower when the risks that are shifted contribute significantly to the variability of income or the availability of foreign exchange or both, in other words, those risks that are systematic at a local level. The outstanding examples are countries whose exports are dominated by one or two primary products, such as Chile (copper), Malaysia (tin, palm oil) or Mexico, Nigeria, and Venezuela (oil). Whether a particular contingent obligation provides risk sharing at a national level depends on its covariance with national aggregate consumption or overall net foreign exchange transfers.⁶

Hedging is accomplished when financing terms are selected to minimize the borrower's exposure to adverse fluctuations in the cost of finance resulting from shifts in external economic variables, such as interest rates and exchange rates. Hedging can be accomplished through the purchase of options or through entry into swap contracts. Using either of these instruments, the borrower can manage risk independently of the supply of capital.

Managerial participation or control refers to the extent that private agents participate in the selection of investments and/or their management over time. With the exception of the World Bank, this participation is virtually nil for general

⁶A country's "utility" will be a function of the level and variability of its overall consumption, assuming away distributional considerations. The impact of a particular obligation on this utility will depend on its contribution to the level and variability of net foreign transfers which influence the level of consumption.

obligation lenders. It will be greatest in the case of claims that are contingent on the outcomes of particular projects or firms such as equities, quasi-equities, commercial bonds, or project loans.

The positions along these dimensions of various alternatives, including general obligation financing, direct foreign investment, portfolio equity investment (both in individual shares and in national funds), quasi-equity, and project lending are shown in Figure 1.

Figure1 here

General obligation financing, at the origin, provides the benchmark. On an *ex ante* basis, it offers the lowest cost, but it also involves no *ex ante* risk sharing or managerial involvement. Direct foreign investment typically has a higher expected cost, but it also combines risk sharing with managerial control of investments and, often, a substantial international integration of operations. Other alternatives typically are more focused in the dimensions that they provide. Commodity bonds, for example, provide risk sharing but no managerial involvement, while portfolio equity and quasi-equity investment -- where the lender is entitled to an income stream that depends in some well-defined way on the success of the project but with a narrow claim to participate in ownership or control. -- share risks and responsibilities, but over a narrower range of outcomes than direct investment.

box

Alternative Finance Modes

Direct investment, the traditional alternative to sovereign borrowing, entitles the investor to a *pro rata* share of the distributed profits of the firm. It typically is motivated by the return the parent expects to be able to earn by making use of its existing knowhow in a local operation and/or by incorporating the local operation in its global production and marketing network. Thus it responds largely to firm specific, microeconomic factors as well as to macroeconomic prospects in the host country. In some cases, however, direct investment also serves to overcome limits to

the enforceability of other cross-border claims posed by country risk or the absence of the necessary local institutions.

Portfolio investment in equities quoted on public stock markets, like direct investment, entitles the investor to a share in the profits of private enterprise. Unlike the direct investor, however, the equity investor typically is seeking *only* a share of profits, and not the responsibilities of control. Indeed, many equity investors deliberately restrict their holdings to a small percentage of the total stock (less than 5 percent), in order to maintain liquidity and avoid being forced to take responsibility for saving the firm if they lose confidence in its management.

Portfolio equity investment can involve varying degrees of penetration of the domestic economy. The least penetrating mode, popular in many LDCs, is the offshore investment trust (closed end fund) that invests in a broadly diversified portfolio of domestic shares. Other more penetrating modes involve investments in individual shares, either through offshore listings of LDC firms or local purchases of locally listed shares. While portfolio investment is typically defined as involving little or no managerial control, this too can vary substantially. A national index fund may or may not participate in the governance of the firms in which it invests. If it does, though, the general practice is to separate the nationality of ownership and control by appointing a local investment management firm that represents shareholder interests on boards, etc.

Quasi-Equity Investments break open the package of risk sharing and managerial control that direct investment has typically constituted. These new forms of international investment include joint ventures, licensing agreements, franchising, management contracts, turnkey contracts, production sharing, and international subcontracting.⁷ They permit the host country to single out the particular features controlled by the foreign enterprise that cannot economically be obtained elsewhere, and to contract for those without allowing foreign control of the domestic operation.

Non-recourse Project or Stand-Alone Finance provides another way to shift risks and responsibility to foreign investors by linking borrowing to particular enterprises or projects without a general guarantee. In such cases, the lender is exposed to the downside risks of the undertakings being financed, but in contrast to

⁷For a description of these instruments, see Lessard and Williamson [1985] and Oman [1984].

equity or quasi-equity claims, does not share in the upside potential. From the perspective of the borrower, such financing can be thought of as borrowing at a rate that is independent of the project's success and purchasing insurance to service the debt in case the project fails. It may also involve the earmarking of project revenues for servicing the project borrowing. Clearly, therefore, the lender would require a higher promised interest rate on such loans than on general obligations.⁸

Just as equities or quasi-equities linked to particular projects or firms transfer some or all of the risks of those undertakings to investors, *contingent general obligations* do the same for the country as a whole. A country that is heavily dependent on, say, oil or copper revenues could issue commodity-linked bonds. With such bonds, debt service would remain a sovereign obligation with the implied enforcement leverage, but the amount of the debt service under any set of circumstances would be determined by the price of the commodity.

-----endbox-----

II. Potential Benefits of Alternative Finance

Given that most alternative modes of finance involve somewhat higher expected costs than floating-rate, general obligation borrowing, why should borrowers ever prefer them? The key reasons, which we develop below, are that these alternatives often are more attractive in terms of their distribution of costs over time and across circumstances and in terms of their incentive effects and interactions with local financial markets. In contrast to expected cost, which by definition is a zero-sum game between lenders and borrowers, these dimensions can give rise to positive sum combinations.⁹

⁸ The exception would be a case where the lender is shielded from transfer risk by escrow arrangements that provide for debt-service payments out of export proceeds before they are remitted to the host country.

⁹The exception would be the case where a reduction in current interest rates, by reducing the probability of default, would increase the present value of lenders' claims.

Time Profile of Debt Service

Other things equal, a borrowing country will prefer financing whose time profile of repayment obligations matches the profile of resources available for debt service. The usual rule of thumb is that long-term projects should be financed by loans with equivalent maturities, while current trade activities can be financed with short-term obligations. However, at the country level the matching should be in terms of ability to pay at the aggregate level, which has little to do with the maturity of the assets being financed. In practice, time matching requires spreading debt service as equally as possible over future periods where foreign-exchange surpluses, ready access to new financing, or both are anticipated and, in particular, avoiding the bunching of maturities. Debt rescheduling has effectively transformed the obligations of most LDCs into perpetuities, leaving little room for further gains on this dimension. The time matching of LDCs' obligations could still be improved by recontracting on a price-level indexed basis, thus transforming a nominal annuity into a real one. Automatic capitalization of the inflation portion of the nominal interest rate would serve roughly the same purpose.¹⁰

Profile of Costs Across Circumstances

All investment involves risk taking. When a developing country finances an investment project by incurring debt, it implicitly accepts virtually all of the risks of the activity being financed. Losses can be passed on to the lender only by default or the credible threat of default -- a strategy that typically involves deadweight costs.

An oil producing country, for example, might consider financing its needs either with general obligation borrowing or with a share of its oil income. With general obligation borrowing, it would be committing itself to repay an amount of foreign exchange that is independent of the condition of the domestic economy.¹¹ Thus, the same debt service will be due when foreign exchange is scarce as when it is

¹⁰The difference between the two is that price-level linked financing locks in a real interest rate, while inflation-adjusted nominal financing does not.

¹¹Floating rate borrowing, in fact, is likely to be more perverse since debt service will be greatest when nominal rates are highest which is likely to coincide with periods of economic distress for LDCs.

not. If servicing obligations take the form of a share of net foreign exchange earnings, in contrast, repayments will be smallest when foreign exchange is scarcest, and *vice-versa*. Clearly, finance giving rise to obligations keyed to a country's capacity to pay is less costly in terms of its well-being, other things being equal, and hence it should be willing to pay a somewhat higher expected monetary cost for such financing. concessional finance in terms of expected payments is likely to be general obligation bank borrowing or floating rate notes, where the borrower promises to pay a specified spread over short-term market rates regardless of its own circumstances. However, to the extent that upswings in interest rates and hence debt service coincide with a worsening of the borrower's overall foreign exchange situation (either because the factors giving rise to these swings tend to coincide with factors depressing demand for its exports or because of its other interest-bearing foreign obligations) such financing will involve relatively large payments when foreign exchange is scarcest.

On the other hand, borrowing with an interest-rate cap might be more costly on average, since lenders would charge a risk premium for the interest-rate insurance implicit in the cap. But it might be less "costly" in terms of the borrowing country's general well-being since payments would be limited in periods where market rates are very high and, as a result, the borrower is under a great deal of financial pressure. The expected cost of financing a particular activity with equity is likely to be even higher, but its *ex ante* "cost" in terms of the borrowing country's well-being might be comparable or lower than the cost of bank credit since the largest payments would be likely to be due when times are good for the borrowing country. In fact, over the last decade, the cumulative return to investors on private equity holdings in a number of highly indebted countries including Brazil and Mexico has been substantially less than that of general obligation loans.¹²

Because borrowing countries and investors who participate in world capital markets differ in the risks to which they are exposed, they will possess comparative advantage in bearing particular risks. The economies of Mexico, Indonesia and Nigeria, for example, are much more exposed to shifts in energy prices than the world economy as a whole. This comparative advantage will be reflected in the fact that the premium demanded by world investors for bearing oil-price risks will be

¹²Unpublished results provided by Vihang Errunza.

substantially lower than the premium such countries should be willing to pay to , avoid them. Thus these oil exporters can gain by laying off some of these risks through financing arrangements. In contrast, oil importers such as Brazil or Korea would benefit from financing arrangements that relate debt-service inversely to oil prices.

Furthermore, because of domestic rigidities, developing countries can find themselves short of foreign exchange, which gives them a greater effective exposure to variations in real and nominal interest rates than industrial country borrowers or lenders.¹³ This exposure will be reinforced to the extent that variations in world interest rates, or the exchange rates of currencies in which they borrow, accentuate the volatility of their foreign-exchange earnings before debt service. As a result, developing countries will, other things being equal, benefit from financial terms that limit their exposure to such variations.

Once the question of cost is extended to one of how the costs are distributed across circumstances, selecting appropriate terms for borrowing becomes an issue of comparative advantage. Assuming that world financial markets work reasonably well and that a particular developing country is a price taker in those markets, it should finance itself on those terms that most closely align its exposures with those of the world economy on a whole. A country where a few commodities make up a significant fraction of GNP or exports -- relative to the role of these commodities in the world economy -- should seek to shift the risks of these commodities to world financial markets. A country that has a relatively high negative exposure to short-term interest rates, as a result of heavy borrowing, should seek forms of financing with fixed or capped interest rates, and so on.

Performance Incentives

In addition to shifting risks, and thus stabilizing a borrower's net income (and wealth) over time, financing whose cost is linked to specified circumstances may have important macro or micro-level incentive effects which can increase the

¹³This is equivalent to assuming that the country has a greater degree of risk aversion than the representative capital market agent if the country were being modelled as a unitary actor.

expected level of a country's income or reduce its variability. Most of the debt literature focuses on the incentive effects of external borrowing on the macroeconomic choices of the borrowing country. A large debt overhang, for example, makes the country less willing to forego current consumption to invest, since it will suffer the full current loss, but will capture only a fraction of the potential future benefits. These effects can either be exacerbated or ameliorated by alternative modes of finance. Since they are most important when there is a large debt overhang, they are discussed in section IV.

Incentive effects also are applicable to lenders, often without regard to whether there is a debt overhang. When financing takes the form of a general obligation, the lender has little stake in the success of the project financed, and hence has little motivation for intervening in its design or management. In contrast, when debt-service obligations are linked to the outcomes of specific projects or undertakings, with limited recourse to a country's general credit, foreign lenders or investors obtain a stake in the success of the project. This linkage can improve performance and reduce risk when lenders or investors have some control over variables crucial to a project's success. For example, if all or part of the yield on an obligation is tied to the performance of the project financed, the lender/investor has a greater interest in seeking that the project design is appropriate and its management satisfactory. Similarly, if the obligations of a borrowing country are linked to its volume of manufactured exports, lenders will have a greater interest in assuring that country's continued access to markets for its products. However, if the potential lenders do not have control over variables relevant to the project's success, the main incentive impact of linking debt-service obligations to outcomes is an improvement in the credit analysis undertaken before the loan is made. In the extreme case where the project will not generate returns sufficient to service the debt under a wide range of circumstances, lenders will not provide any finance on a project basis and thus the project will be killed.

The incentive effects on investors of any financial contract depend on its specificity. Because an equity share is specific to a particular firm, it gives investors an incentive to promote that firm's success. Because a production-share or risk-service contract (typically employed on oil and gas projects) links investor returns to a narrower measure of project success, it focuses incentives on managing those dimensions appropriately. General obligation borrowing, in contrast, is not linked to

any particular project or risk dimension and hence provides lenders with a stake, only in a country's overall foreign-exchange situation.

In cases where a foreign investor can add significantly to the value of an undertaking through its knowledge base or access to markets, some form of stakeholding will be beneficial. But in cases where domestic policy choices are the primary determinant of project success or failure, such foreign participation will confront moral hazard. The risk of self-serving government policies will tend to confound the incentives facing the foreign investor and reduce the credibility of the contract. Since most activities involve both types of risks, it can be beneficial to separate them in contracting.

Impact on Local Financial Markets and Domestic Savings

International finance can never be more than a complement to domestic savings. It will be available on the best terms, and employed most usefully, when it is accompanied by healthy domestic capital formation. A major problem in many developing countries is insufficient capital formation. Indeed, capital flight has been a principal contributor to a number of countries' external financial crises. This poor record reflects unattractive climates for domestic savings including poor macroeconomic prospects, high taxes, and regulations limiting the scope of investment; discrimination against domestic savings such as repressed interest rates and the threat of changes in the level of inflation or other forms of default on implicit financial contracts; and macroeconomic policy distortions, especially in foreign-exchange markets. It also reflects an underinvestment, in many cases, in the institutional infrastructure required for financial deepening.

International finance in the form of general obligation borrowing has allowed LDC governments to bypass local financial markets. As a result, many of the policy measures necessary to stimulate domestic capital formation have been neglected. Certain forms of international finance, in contrast, especially portfolio investment in corporate equities and bonds, rely on domestic markets and hence will be successful only to the extent that these markets flourish. If such claims are held by both foreign and domestic investors, each will provide the other with leverage in their respective policy contexts, increasing the security of these claims.

The optimal pattern of external finance discussed depends to a large extent on 1) the completeness of a country's internal capital markets and 2) the interaction between the structure of finance and micro or macro-level economic outcomes. The simplest case is when the domestic market is complete in that it provides for full diversification of risks within the local economy, that is, that all risks are spread proportionately among all investors, and that either the structure of finance has no micro-level incentive effects or that these are dealt with optimally within the national market. In this case, the sole benefit of international finance will be the alignment of real interest rates with world levels and the diversification at world levels of that proportion of the risks which are systematic at a national level but not at the world level. These risk sharing benefits can be obtained through the issue of shares in a national index fund and do not require alternatives that penetrate the domestic economy.¹⁴

The more realistic case is one where the domestic market is not complete and where the tradeoff between risk diversification and incentives is far from optimal. In this case, foreign commercial finance can serve to complete the local market and to create appropriate micro level-incentives. The precise benefits in this case, of course, depend on the degree of departure from this ideal and the costs involved in terms of unnecessary risks that are borne, inefficiencies in project selection and management, and/or socially profitable transactions that are not undertaken as the result of these departures.

III. Obstacles to Alternative Modes of Finance

Even if alternative modes of finance are desirable in terms of economic efficiency, they are not necessarily feasible. They generally are harder to enforce across national boundaries than general obligations and they require specific domestic legal and institutional infrastructure. An obligation to pay a share of foreign-exchange earnings, for example, is ideal in terms of matching a country's

¹⁴Of course, to the extent that this diversification requires that a majority of risky assets be owned by foreign interests, the governance of these assets might be called into question. See Lessard [1988] for further discussion of this point.

payments with its capacity to pay. But because foreign-exchange earnings are both hard to define and subject to the borrowing country's actions, this kind of contract presents moral hazard of a degree that makes it unlikely that finance would be available on this basis. Similarly, while portfolio equity shifts firm-level risks to investors, it is an open-ended contract that relies on a body of company and securities law which few LDCs possess in order to protect minority investors against conveyance by insiders. Further, to the extent that alternative modes of finance penetrate the national economy, they may result in an impairment of national sovereignty, a reduction in the role of the state, and, perhaps, a loss in rents to privileged domestic suppliers of capital. Thus they are likely to be opposed by various national constituencies.

Country Risk

Financial contracts across national boundaries face a hierarchy of risks. All contracts, with the exception of those involving a legal set aside of specified foreign exchange earnings, are exposed to transfer risk -- the risk that the country will not have or make available the foreign exchange to service the debt. Equity investments or loans to specific companies or projects are also subject to the commercial risks of the firm or project as well as a series of country policy risks. These commercial risks include changes in market conditions, costs, and technology, as well as elements at least partly under managerial control. Policy exposures include measures the country may adopt in managing its economy or to policy measures of other countries. Examples of the former are the austerity measures adopted by developing countries in response to their debt crises, which have thrown many local firms into severe financial crises of their own. Examples of the latter are protectionist policies that threaten export markets. Thus, in many cases, there is no clear dividing line between country and commercial risks.¹⁵

The greater exposure of alternative modes of finance to various country risks results from at least four factors. First, since they are subject to a wider variety of policy impacts, events of nonperformance are significantly harder to define than

¹⁵For a discussion of the nature and effects of country risk on general obligations see Eaton, Gersovitz and Stiglitz [1986]. Lessard [1988] extends the analysis to alternative modes of finance.

with general obligations. Second, since they typically create divergent risk/return profiles among investors, they undermine the formation or functioning of lender cartels that underlie the enforceability of cross-border contracts. Third, at least in part due to the second factor, they typically are implicitly subordinated to general obligation claims, exacerbating the conflict among various classes of claimants. Fourth, because of this conflict, they face an increased likelihood of opportunism by the borrowing country.

Because of these heightened exposures to country risks, investors in alternative obligations will seek measures to protect them against transfer risk or at least put them on a par with scheduled creditors in this regard. This can be achieved in some export-oriented projects by putting in escrow the export proceeds. In some cases this might even enable a country to borrow on better terms for a stand-alone project than would be possible for general obligations, despite the fact that the lender would be accepting the commercial risk of the project. In general, though, this will be opposed by other creditors and violates the principle of not pledging specific assets or revenues to strengthen general obligations.¹⁶

Market-oriented projects that do not generate direct export revenues present a more complex problem. Even if financed on a limited recourse basis, they remain subject to transfer risk and, in many cases, to other risks emanating at least in part from domestic policy choices such as output pricing. These risks often inhibit financing from lenders who have the expertise to take on the commercial risks. Further, except in those cases where enforcement can be transferred to another jurisdiction through escrow mechanisms, there is a catch 22 -- the same factors that create these heightened exposures undermine the credibility of most steps that might be taken by the borrowing country to ameliorate them.

Most of these points apply to domestic as well as to foreign investors. If anything, domestic investors with their typically larger proportional exposures to the national economy are more subject to the spectrum of country risks than

¹⁶There is an importance difference between linking a claim to a specified outcome such as export proceeds and pledging such proceeds to back a noncontingent claim. Pledging assets presents the borrower with the worst of both worlds: the revenues of successful projects are encumbered and hence not fully available to the national treasury, whereas unsuccessful projects represent a drain on the treasury. To set aside substantial components of foreign-exchange earnings reduces a government's flexibility in difficult times and thereby reduces its overall creditworthiness.

foreigners, as major factor in explaining the substitution of foreign for domestic, capital accompanying capital flight.

Institutional Preconditions

Most alternative modes of finance that penetrate the borrowing economy pose institutional preconditions. First and foremost, the domestic legal system must provide effective enforcement of contractual terms, and private investors, especially foreign ones, must have access to that system and the sanctions it imposes. Portfolio equity investment, for example, depends on the existence of a body of corporate and securities laws and practices that provide arms-length minority shareholders with something close to a *pro rata* participation in the benefits of the firms in which they invest.¹⁷ These institutions, in turn, will only develop and function if the tax and regulatory environment does not discriminate against share ownership as opposed to direct investor control of enterprises. Further, in order to attract foreign investors, the country must be willing to allow foreign investors access to their market, and to allow them to withdraw their funds when they feel that opportunities are better elsewhere.

The fact that new LDC equity funds have been launched over the last two years for a number of LDCs including China, India, Malaysia, Philippines, South Korea, Taiwan, Thailand and Turkey suggests that these obstacles can be overcome and their ready market acceptance supports the view that the primary limiting factor is credible supply rather than demand. A further positive factor is that the steps required to attract foreign portfolio investment also improve the context for local equity investment.¹⁸

Direct investment, even in the form of cross-border joint ventures, typically does not rely to the same extent on local company law and is virtually unaffected by securities legislation because of the linkages it creates through technology and

¹⁷Of course, a securities market is required as well. However, the "market" could be located in a developed country rather than the country where the firm is domiciled.

¹⁸Even when portfolio equity is attracted by an offshore listing of a local firm's shares, the accounting and governance requirements of listings in major markets are likely to increase the quality of disclosure. However, this mode may also divert trading volume to foreign markets, thus reducing the scale and depth of domestic institutions.

product transfers. However, it remains exposed to a variety of policy risks including steps that limit the parent's discretion over local operations or constrain its ability to remit profits.

Quasi-equity contracts, since they are narrower and more explicit than equity contracts, may overcome some of these obstacles. Typically, they do not require the same sophisticated, capitalist, institutional infrastructure in the host country and since they generally expose investors only to certain relatively well-defined risks, they may be credible even when the investor has little or no control over the activity in question.

To see these differences, consider alternative arrangements that may be used for financing the development of oil reserves in a developing country. The key commercial risks in such an investment that must be borne by one party or another are the uncertainties regarding recoverable reserves, the price of oil in world markets, and the operating costs of the field. However, a number of risks involving the distribution of the gains between the two parties may make it difficult, if not impossible, to arrive at a mutually agreeable set of contract terms. Such risks include the obvious ones faced by the foreign producer of expropriation or some form of after-the-fact windfall profits taxes, but they also include risks faced by the host country in the form of reservoir stripping or, perhaps, underproduction, as well as a boycott of output in the event of a dispute. They also entail exposure of either party to general policy measures of the other (or, in the case of foreign investors, of their home country) that affect the profitability of oil production to the other. These risks include exchange controls and changes in general tax policies.

With traditional direct or portfolio equity investment, the foreign investor faces the whole spectrum of these risks. This arrangement will be inefficient if such investors do not possess a comparative advantage vis-a-vis the host country in bearing some of them, either because their exposures to such risks are greater or because the risks involve a substantial element of moral hazard -- that is, the possibility that the host government will influence outcomes to its benefit but to the detriment of the foreign investor. The degree of inefficiency, and hence the benefit of a more narrowly drawn risk contract, naturally depends on the specific circumstances of each investment. Again, these arguments apply to domestic as well as foreign investors.

Political Considerations

As in the case of equity investment, many of the obstacles to increased quasi-equity flows lie in the policies of the developing countries themselves. In many cases, alternatives have been spurned because of their perceived high cost. While this may in part be justified on the basis that the supply of alternatives is not competitive, it also appears that many countries have underestimated the cost of the downside risks they have retained by financing projects with general obligation borrowing.

The fact that penetrating alternatives typically bypass the state, and hence reduce its control over the internal allocation of resources, is another factor that has led borrower countries to resist them or at least favor general obligation borrowing. As Frieden [1981] and others point out, the increased state control over resources provided by sovereign borrowing was a major factor favoring its use. The same elements appear today in the debate over who should control the allocation of local resources should any portion of interest payments on sovereign debt be made in local currency.

Finally, of course, certain local private interests may also benefit from restrictions on inflows of penetrating finance. This is most likely where certain local groups have access to offshore markets on their own, while most firms are cut off from such flows.

Investor Country Obstacles

While most obstacles to alternative modes of finance lie in the policies and institutions of LDCs, significant obstacles also have been created through the policies and institutions of industrialized countries. Tax laws and foreign investment insurance schemes in investor countries, for example, tend to favor direct investment over more limited forms of contractual involvement, although OPIC and several of the European insurance schemes extend to contractual schemes that do not involve ownership. The World Bank confines itself exclusively to lending rather than taking risk positions, although it is now considering commodity-price linked financing and forms of co-financing that support quasi-equity investment. The International Finance Corporation has made quasi-equity investments in mining and

forest-products, but given its mandate to finance only private sector undertakings, these deals have typically been small.

IV. Alternative Finance With An Existing Debt Overhang

So far, we have focused on how a country should structure its external obligations if it were starting with a clean slate. In this section we reexamine the desirability and feasibility of alternative modes of finance for countries with a debt overhang, where the current market value of their obligations is discounted from their face value and access to new, voluntary financing is limited or nonexistent. The presence of this overhang clearly complicates the analysis. It raises the tantalizing possibility of "capturing" some of the discount, but at the same time it exacerbates the conflicts between various classes of claimants and changes borrowers' incentives regarding the overall structure of their obligations. The key question is whether exchanges involving alternatives offer a viable third option -- recontracting -- to the existing options of financing or forgiving.¹⁹

Potential Benefits of Recontracting

The potential benefits of recontracting in ways that shift the circumstances under which payments are due and, possibly, the responsibility for specific activities can be examined in the context of the "debt relief Laffer curve"²⁰ that illustrates the tradeoff between the face value of a country's obligations and their (discounted risk-adjusted) market value. The curve DRLC in Figure 2A is comprised of two effects: the value of the debt assuming no incentive effects (DRLC*) which diverges from the 45 degree line as the possibility of nonpayment increases, and an "incentive wedge" (W) which is responsible for the decline in the curve. This incentive wedge, in turn, reflects several effects. First, when the debt burden is large, a country has less of an incentive to make current sacrifices in order to possibly improve its future situation since a large part of the new income or

¹⁹ See Krugman [1987] for a discussion of financing and forgiving.

²⁰This concept was first applied to the debt issue by Krugman [1987] and subsequently has been elaborated by Krugman [1988], Froot [1988], and Diwan and Claessens [1988].

resources generated will be captured by creditors. Second, it is more likely to resort of "taxes" on subordinated creditors, typically domestic depositors, bondholders, and investors, in order to meet the claims of external senior creditors and thus it acts to reduce their investment.²¹ Third, when the burden is large, a country is more likely to "walk away" from current obligations, implicitly opting out of some future international trade and finance possibilities.

Figure 2 about here

The shape of the DRLC, however, is not independent of the way debt is structured. If debt is "indexed" to some exogenous variable that is positively related to its ability to pay, for example, the "no incentives" curve will shift upward to DRLC* since a higher proportion of promised future payments will fall due under circumstances where the country is able to pay and hence the expected degree of nonpayment will be smaller, as shown in Figure 2B. Combined with the new incentive wedge W', which will depend on the relative incentive effects of higher payments in good periods versus lower ones in poor periods, this will yield a new overall curve, DRLC'.²² Finally, if providing creditors (investors) with a direct participation in the risks and responsibilities of particular investments improves the selection and operation of these assets, restructuring to increase participation will lead to a further shifting of the curve to DRLC''.

If a debtor country could recontract by exchanging an efficient package of alternative obligations for all of its existing general obligations with identical (pre-exchange) market values, it clearly would gain and creditors would be indifferent. This is important, since in the absence of such an exchange Krugman and others show that in the case of moderately overhung countries there are no options to "capture" discounts that are mutually desirable to creditors and debtors. Further, if the exchange covers only some existing obligations, the benefit of the shifting DRLC

²¹See for example Eaton [1987].

²²Krugman's [1988] example would suggest that this would not happen. However, he assumes that a country is badly "overhung" to the point that it uses all of its foreign exchange even in good periods. If one assumes there is headroom in good periods, pareto efficient recontracting will be possible.

would accrue to existing creditors and the country might actually be worse off.²³,

Concerted Recontracting

There is a very strong case that borrowers and creditors would benefit from concerted recontracting that incorporates efficient alternatives to floating rate general obligations. Mexico's 1986 proposal that would have linked some fraction of payments to oil prices, for example, would have benefitted both parties if it could have been incorporated at a price that yielded lenders the same *ex ante* market value as the package they actually obtained. Under current circumstances, it is more likely that Mexico can achieve its desired reduction of current debt service as well as the face value of its obligations if it agrees to allow banks to "recapture" some of the concession if oil prices rise and/or to recycle some of the interest they forego in the form of local currency to be invested or lent as they see fit. The presence of a possible mutual gain, of course, does not mean that recontracting will be easy given the myriad conflicts and gaming behaviors present in the debt situation. In particular, creditors would have to grant the borrower some "breathing space" relative to the current debt service they would otherwise obtain in order to induce it to commit to greater payments in other circumstances than those implied by traditional obligations.

Voluntary Recontracting

Voluntary recontracting can take two forms: exchanges of existing assets for penetrating financial claims, typically equity, with rights to the management and profits of particular assets; and exit bonds. Much of the apparent magic of debt-equity swaps (or exchanges involving any other alternative claim), goes away when they are broken down into their two component parts: a buyback of debt and a sale of equity with at least part of the secondary market discount being retained by the private parties to the transaction. The benefits of marginal buybacks even at the

²³This point parallels the debate on the benefits of buybacks, with added gains resulting from efficient recontracting. For differing views on the benefits to borrowers of buybacks, from most pessimistic to most optimistic, see Bulow and Rogoff [1988], Krugman [1988], Dooley [1988], and Williamson [1988].

secondary market price are the subject of considerable dispute, with the conclusion that they are limited at best.

Whether any discount should be offered on equity purchases depends primarily on whether they improve the aggregate investment base through encouraging new, economically beneficial investments that would not take place otherwise or by improving the efficiency of existing assets. Equity investors with strategic stakes in local firms will have incentives to improve their performance, and the improvement may be significant if the investors also bring the relevant expertise or network linkages. This effect is likely to be greatest in cases where the conversion involves firms that have been controlled directly or indirectly by the local government. This benefit is not limited to takeovers by foreign firms. Domestic private investors may be able to do just as well, with the additional benefit that they will add to the domestic political constituency for allowing a greater role for market forces.

Granting a discount also may be desirable if the exchange alters the aggregate structure of obligations in the "right" direction. If it induces an investor, for example, to accept a subordinated claim that will pay dividends only in very good states of nature, for example, transferring some or all of the current debt discount to the new investment may be justified.²⁴ However, it must be recognized that many debt equity exchanges merely shuffle the ownership of assets among investors and have no such potentially beneficial aggregate effects. Further, they also often result in the abuses such as round-tripping. Nevertheless, debt-equity swaps may have indirect benefits by breaking the existing financial logjam and focusing financial market interest on the country.

Many debt-equity conversions that have taken place to date appear to make little sense, even when through open auctions which recapture as much of the discount as possible. Foreign purchases of public utilities, where there is no effective

²⁴Helpman's negative conclusion on debt-equity exchanges is in part the result of his assumption that they result in the creation of new claims that are *de facto* senior to general obligations. The common argument that a country should not in effect adopt "dual exchange rates" for some investments overlooks the fact that the debt overhang is not neutral in its impact on the value of different types of obligations, and that the same factors that lead to a discount on the existing debt may justify a similar discount on other claims subject to the same country risks.

technology transfer by the new owners, little or no beneficial risk shifting²⁵, and the possibility of increased conflicts between investors and the consuming public, appear to add little. Further, the risk shifting and even incentive benefits do not require the full sale of assets in many cases. Intermediate, quasi-equity forms of investment are likely to both improve the structure of a country's obligations and bring in foreign expertise where needed, while avoiding some of the inevitable conflicts of foreign ownership.

Exit Bonds and New Financing

The key issue with exit bonds as well as new senior financing is that existing creditors typically will not grant the necessary waivers, since this is tantamount to forgiving part of the debt. There are at least two cases where the linkage of a buyback and the issuance of a new security may be mutually beneficial and, thus, overcome this obstacle. One is a buyback coupled with the issuance of new project-linked finance, the other a buyback coupled with the issuance of "indexed" exit bonds. With regard to project financing, consider a country whose creditworthiness is too weak to sustain new general obligation borrowing, but which has a highly promising, export-oriented project whose development would be impossible without foreign finance. With stand-alone project financing (where project earnings are put in escrow to cover debt service), the project would go ahead and, at worst, the country would have no less free foreign exchange than it otherwise would have had, leaving the position of existing creditors unaffected. But if the project was successful, it would add to the supply of free foreign exchange and thus benefit the existing creditors. Thus the general creditors might waive their "overhanging" senior claim to the project revenues in order to obtain the residual benefits.

The case with indexed debt is similar. Consider, for example, an issue of bonds with substantially below market interest rates offset by commodity price-linked options. Such options could be sold successfully to non-bank third parties typically interested in such commodity plays only if they were senior to general obligation

²⁵At a general level, the profitability of such investments will depend on world energy prices and local levels of aggregate activity. It generally will be efficient to shift risks tied to aggregate output to foreign investors. Thus the desirability of international risk sharing will depend primarily on the country's net exposure to energy prices.

debt. Because of the reduction in required debt service in "bad times," banks might grant such waivers, whereas they would not grant waivers to a equivalent new issue that did not involve a reduction in current debt service.

V. Conclusions: How to Get There from Here

Alternative modes of finance for LDCs including equity, quasi-equity, and indexed general obligations offer major advantages of risk sharing and managerial participation over floating-rate, general obligation borrowing. The limited role they currently play in these countries' external financing reflects a number of factors during the years of debt buildup including a lack of awareness of these benefits, an assertion of state power, and a series of obstacles to their issuance including country risk and inadequate domestic institutional infrastructure. The debt crisis has underscored many of the benefits of alternatives, but little has been done to change LDCs' financial structures because of the resulting loss of access to voluntary finance, the preoccupation of banks and international institutions with maintaining the appearance of compliance with existing debt terms, the perverse borrower incentives created by the debt overhang, and the heightened conflicts between classes of existing and prospective claimants given this overhang.

Following a review of the benefits and of and obstacles to alternative finance for a country that is starting with a clean financial slate, this chapter has focused on some of the special problems and opportunities created by the debt overhang. The general conclusions are that:

- 1) any concerted refinancing arrangements should include recontracting along more efficient lines and*
- 2) despite the difficulties of marginal, voluntary exchanges in the face of debt overhangs, carefully designed and managed programs can result in significant mutual benefits.*

In the case of concerted exchanges, the inclusion of alternative forms of finance that shift payments across circumstances can significantly close the gap between levels of current debt service that are politically feasible and lead to the required return to growth of LDCs and those that banks will demand as realistic.

Voluntary exchanges should take the form not only of debt-equity swaps, but also, of exchanges of existing government obligations for new obligations that are indexed to external variables such as commodity prices or to some formula of profitability of domestic assets, such as revenue bonds for fee-generating infrastructure.

Given the obstacles to alternatives that existed prior to the debt crisis and have, in many case, been exacerbated by it, this recontracting will not take place without significant changes in policies on the part of creditor country regulatory agencies, international financial institutions, and the LDCs themselves. We conclude with a brief review of these steps.

Regulatory Agencies

The current practice of restructuring through concerted new money packages is largely the result of an accounting and regulatory system for U.S. banks that allows them to operate with impaired capital resulting from economic losses on LDC loans as long as they do not "realize" these losses through sales or swaps into alternative types of claims. Thus, the U.S. government, through the deposit insurance and bank regulatory system, implicitly shares some of these banks' losses as long as they continue to hold the original obligations or their restructured equivalents. A key step toward more efficient recontracting would be to allow banks to obtain similar benefits if they exchanged their holdings for alternative instruments.

Creditor country governments also apply much of the leverage required to put financing packages together, contending with conflicts and free-ridership among banks and opportunism on the part of borrowers. This leverage can and should be applied to support alternative approaches.

International Financial Institutions

International financial institutions (IFIs), especially the IMF and the World Bank in its structural adjustment role, have tended to work in concert with holders of general obligations, often at the expense of foreign and domestic holders of alternative claims. A change in this role could be particularly useful in promoting quasi-equity investments and project lending which represent a middle ground

between arms-length and fully penetrating foreign finance. In the case of quasi-equity investments, for example, the World Bank might extend its cofinancing program to cover such operations. Alternatively, the mandate of the IFC might be broadened to allow it to take quasi-equity positions in government-sponsored projects that could be structured on a commercial, stand-alone basis. In addition, the World Bank or regional IFI might assist risk unbundling by enhancing such claims against transfer risk, perhaps by assigning some fraction of its net transfers to a country to a credit enhancement facility for designated claims.²⁶ This would implicitly shift the benefits of such future financing from existing creditors to the new obligations, creating a type of *de facto* seniority for these new claims without violating existing agreements. Thus, the absence of a true risk-bearing capacity for the IFIs does not preclude them from playing a role in supporting quasi-equity investments. Rather, the nature of the IFIs' strengths, and their preferred creditor position, make them ideal for bearing and mitigating transfer risk which can easily prevent such transactions from taking place.

In the case of domestically-oriented projects that provide no direct foreign exchange and which entail "political performance risks," IFIs and investment guarantee authorities could do much to relieve this problem. An IFI, for example, could include as project covenants the features and performance requirements that lenders need. Similarly, an IFI or a guarantee authority such as OPIC or MIGA could provide guarantees against transfer risks. Such guarantees could be much narrower than those extended by the World Bank under its current co-financing programs, and thus would allow greater specialization in risk-taking.

Borrower Governments

The first step for borrower governments is to actively seek to recontract their debt as well as to obtain relief through rescheduling, interest rate reductions, or outright forgiveness. This may present them with a conflict since moving to a more efficient structure of liabilities will actually reduce their bargaining power for relief. Thus they probably will not be the first to propose such recontracting, but they should be ready to make it a key element in their subsequent negotiations.

²⁶Several such proposals have been made within the IFIs in recent months.

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Figure 1

Modes of Commercial Finance

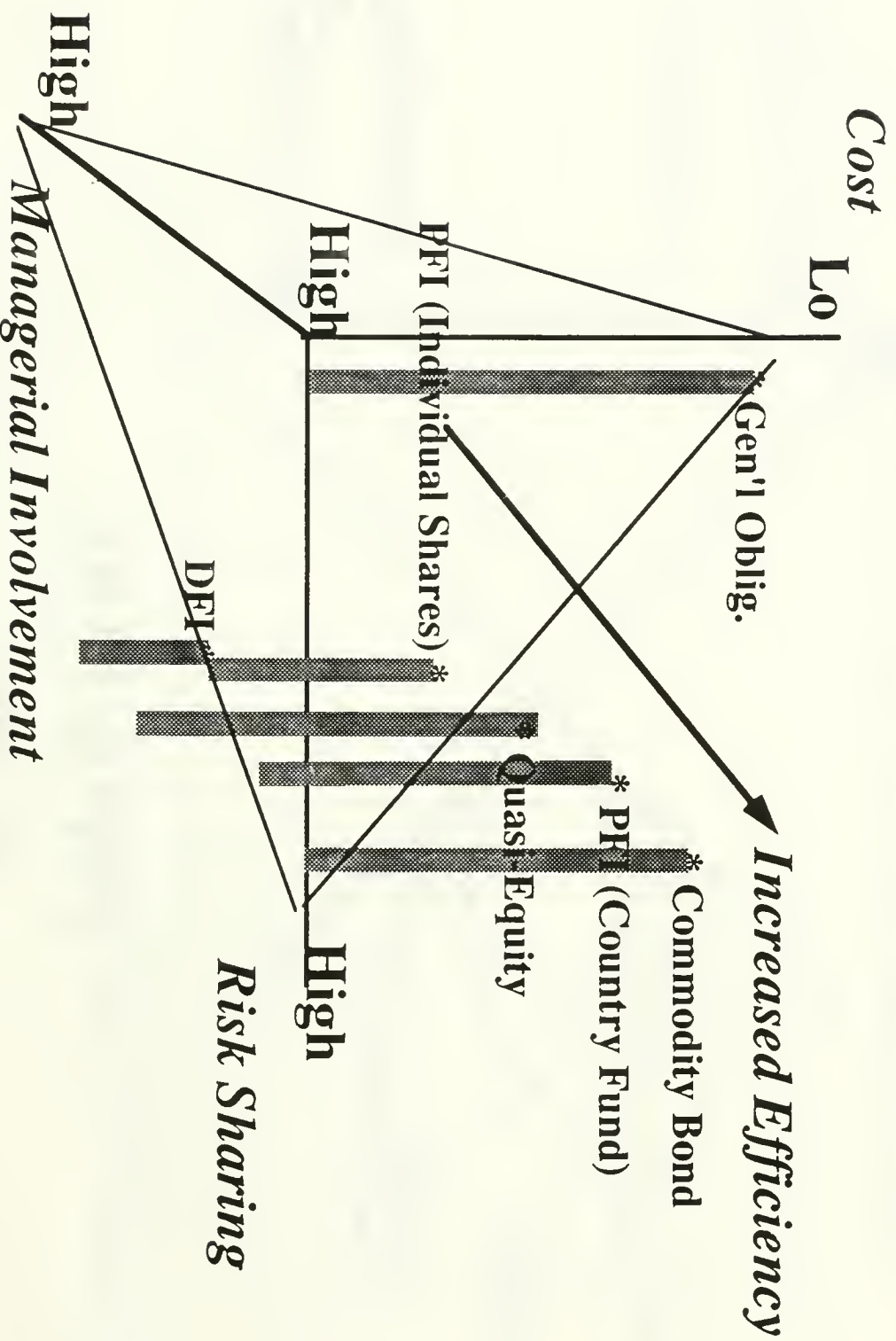


Figure 2A

Debt Relief

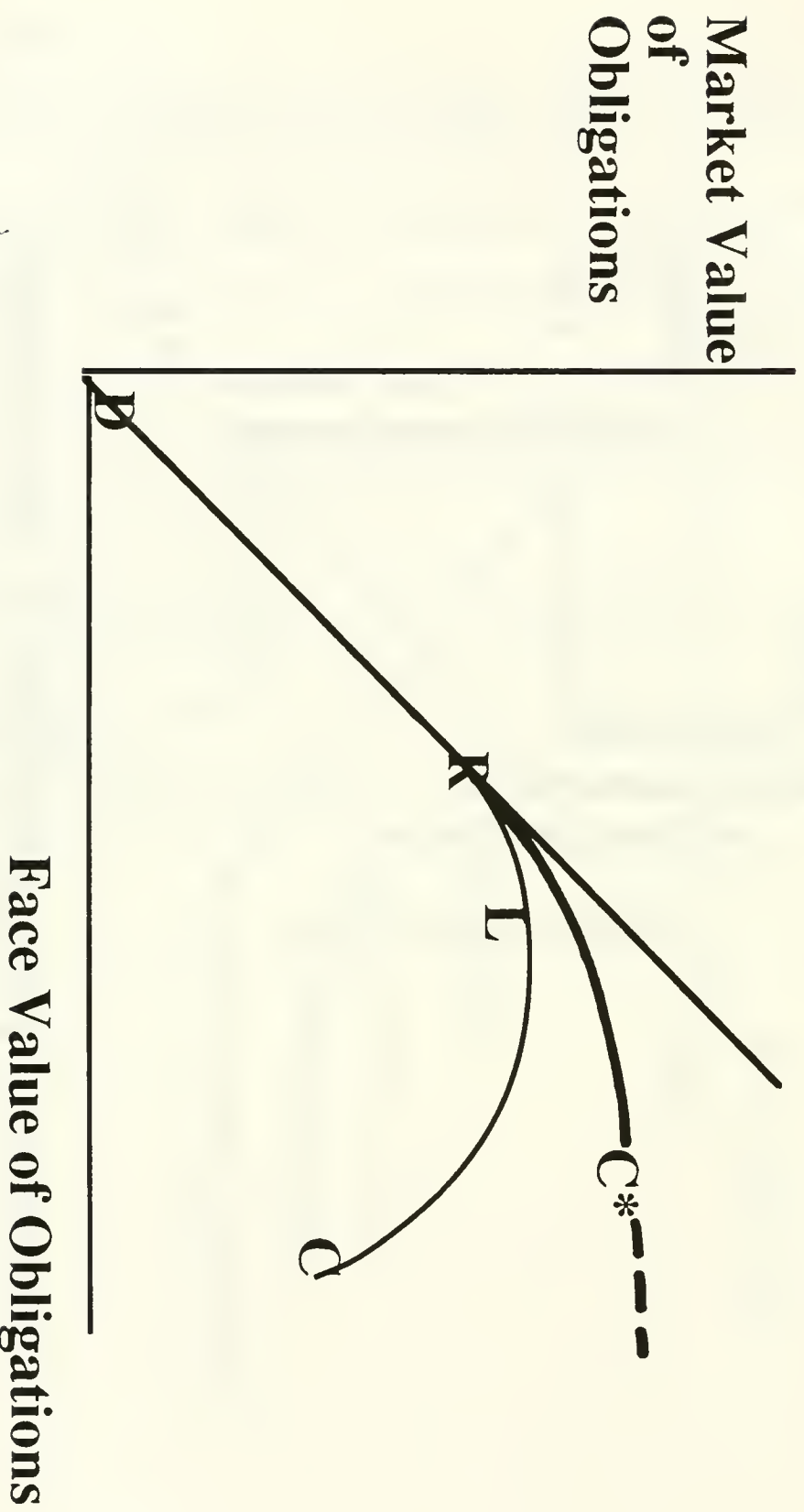
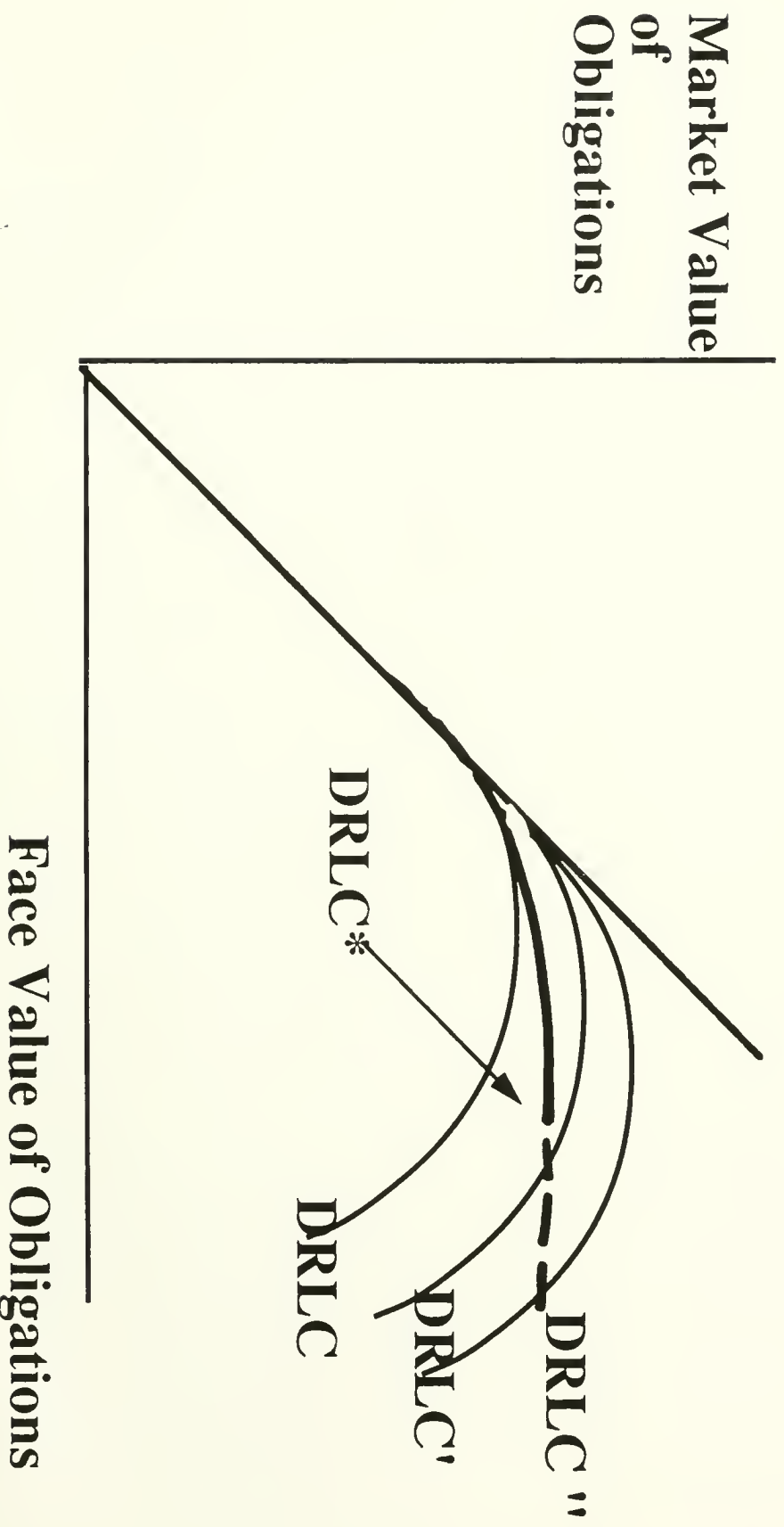


Figure 2B

Debt Recontracting



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